Ann Forshaw Project 2

INTC5320

Doug Harvey

**Calculate Your BMI**

Grade Level: 8

Duration of Lesson:  1 day (50 minute class period)

Materials:  scales, tape measures

Technology Tools:   computers, TI-83 plus SE graphing calculators, link cords, SmartBoard calculator

Procedures:

* Pair students and have them determine their height and weight.  They will then use this information to calculate their Body Mass Index (BMI) using a BMI calculator on a website and record their data on a student worksheet.  (The formula is available from the [Centers for Disease Control](http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-adult-formula.htm).)
* In List 1, number the cells beginning at 1 and ending with the number of students in your class.  (To do this go to Stat, Edit, and enter numbers in the L1 column.)
* Students will then input their BMI in List 2 on an overhead display TI-83 Plus SE calculator.  Leave the overhead display turned off so students will not know any individual's BMI.
* After everyone has input their BMI, turn on the overhead display to show students the data lists.
* Then have students link their calculators until everyone's calculator has both lists.
* Once everyone has both lists, have students return to pairs.
* Then they will produce a scatter plot of their BMIs.  (If this is the first time students have used the List features, you may want to go through the steps with them on the overhead display.)
* Have students Trace to check that the values are correct and use the data to answer the questions on the student worksheet.
* Enrichment Activities:  Have your class communicate with other schools electronically (email, teleconference, etc.) to gather data in different regions of the county, state, country, or world.  The data could then be compared/contrasted with your school's data.
* Evaluation/Assessment:  Give student a list of hypothetical persons’ heights and weights.  Have them calculate the BMI for each.  Then have them display the data in a scatter plot.  If a graphlink and computer are available, have students print their displays.
* [***National Standards***](http://www.mcrel.org/)   
  *Math*   
  Standard 6:  Understands and applies basic and advanced concepts of statistics and data analysis   
  *Language Arts*   
  Standard 1:  Uses the general skills and strategies of the writing process   
  Standard 4:  Gathers and uses information for research purposes   
  Standard 7:  Uses reading skills and strategies to understand and interpret a variety of informational texts   
  *Health*   
  Standard 1:  Knows the availability and effective use of health services, products, and information   
  Standard 6:  Understands essential concepts about nutrition and diet   
  Standard 7:  Knows how to maintain and promote personal health
* References:   
  [EXCELLENT TI-83 tutorials](http://www.prenhall.com/divisions/esm/app/calculator/)   
  [Overweight and Obesity Fact Sheet Overweight in Children and Adolescents](http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_adolescents.htm)   
  [BMI categories background site](http://dir.coolclips.com/Household/Bathroom/Weight_Scales/)   
  [Discovery School Clip Art](http://school.discovery.com/clipart/)   
  Clip art licensed from the Clip Art Gallery on DiscoverySchool.com